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| 09/901,549      | 07/09/2001  | Masakuni Iwanaga     | 01410/LH            | 7119             |

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EXAMINER

CARTER, AARON W

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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2625

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/901,549

Applicant(s)

IWANAGA, MASAKUNI

Examiner

Aaron W Carter

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 and 8 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,9-15 is/are rejected.
- 7) ☐ Claim(s) 3 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3,4,5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,680,205 to Borza.

As to claim 1, Borza discloses an electronic device comprising:

An image pickup unit including an image pickup element and a lens system (Fig. 1a);

A focus controller configured to change a distance between said image pickup element and said lens system in accordance with switching between an ordinary imaging mode and fingerprint imaging mode (column 1, lines 48-62, wherein the focus controller corresponds to swiveling or tilt able mounting to switch between the two lens).

As to claim 2, Borza discloses an electronic device according to claim 1, further comprising:

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A light source provided inside of a body of said device and configured to emit light outward of the body through said lens system in the fingerprint imaging mode (Fig 1a, element 27).

As to claim 4, Borza discloses an electronic device comprising:

An image pickup unit including an image pickup lens and an image pickup element arranged on an image pickup axis of said image pickup lens, said image pickup unit being rotatably provided at a body of said device so that an imaging direction of said image pickup unit is oriented in an inward direction or an outward direction of the body of said device (Figs. 1a and 1b, wherein Fig. 1a the image pickup is oriented in an inward direction for picking up an image of the fingerprint and in Fig. 1b the lens system has been rotated to allow image pickup of objects outside the body of the device);

An image pickup window provided on a side face of the body of said device such that a fingerprint image of a finger pressed against said image pickup window is incident to the image pickup lens when the imaging direction of said image pickup unit is oriented in the inward direction of the body of said device (Fig. 1a, elements F and 26a and column 2, lines 39-48); and

A light source provided inside of the body of said device and configured to emit light outward of said body through said image pickup window (Fig. 1a, element 27),

Wherein an ordinary imaging mode is set if the imaging direction of said image pickup unit is oriented in the outward direction, and a fingerprint imaging mode is set if the imaging direction of said image pickup unit is oriented in the inward direction (Figs. 1a and 1b, wherein Fig. 1a the image pickup is oriented in an inward direction for picking up an image of the

fingerprint and in Fig. 1b the lens system has been rotated to allow image pickup of objects outside the body of the device).

As to claim 5, Borza discloses the electronic device according to claim 4, further comprising a mirror configured to guide the fingerprint image of the finger pressed against said image pickup window to said image pickup element when the imaging direction of said image pickup unit is oriented in the inward direction (Fig. 1A, element 26).

3. Claims 9 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,366,682 to Hoffman et al. ("Hoffman").

As to claim 9, Hoffman discloses a fingerprint authentication system comprising a terminal device and a fingerprint authentication device connected to each other via a network (Fig. 1),

Said terminal device comprising:

A fingerprint reader configured to read a fingerprint image of a user (Fig. 1, Fig. 3, element 13 and column 9, lines 27-30); and

A fingerprint transmitter configured to transmit the fingerprint image read by said fingerprint reader to said fingerprint authentication device (Fig. 1 and column 9, lines 36-43 and column 9, line 66 – column 10, line 4), and

Said fingerprint authentication device comprising:

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A memory configured to store a reference fingerprint image (Fig. 1, DPC, Biometric Database);

A fingerprint receiver configured to receive the fingerprint image transmitted from said fingerprint transmitter (column 9, lines 36-43 and Fig. 1); and

A collation section configured to collate the fingerprint image received by said fingerprint receiver with at least part of the reference fingerprint image based on a size of the fingerprint image received by said fingerprint receiver (column 10, lines 2-4).

As to claim 12, Hoffman discloses the fingerprint authentication system according to claim 9, wherein said fingerprint authentication device comprises a fingerprint processor configured to process the reference fingerprint image stored in said memory in a form suitable to a request from said terminal device, and transmit the image to said terminal device (Fig. 5 and 6).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman in view of USPN 6,134,340 to Hsu et al. ("Hsu").

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As to claim 10, Hoffman discloses the fingerprint authentication system according to claim 9.

Hoffman does not disclose expressly any of the other limitation detailed in claim 10.

Hsu discloses a detector configured to detect a plurality of small regions in the reference fingerprint image having a maximum correlation with regard to the fingerprint image received by said fingerprint receiver (column 2, lines 19-25); and

A determining section configured to determine identity between the fingerprint image received by said fingerprint receiver and the reference fingerprint image based on a position relationship of the plurality of small regions (column 2, lines 25-35).

Hoffman & Hsu are combinable because they are from the same art of fingerprint analysis.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add to the invention of Hoffman the invention of Hsu.

The suggestion/motivation for doing so would have been that the invention of Hsu provides the invention of Hoffman with a rapid and reliable correlation technique (Hsu, column 1, lines 65-67).

Therefore, it would have been obvious to combine Hoffman with Hsu to obtain the invention as specified in claim 10.

As to claim 13, please refer to the rejections made for claims 9 and 10 above.

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6. Claims 11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman and Hsu in view of USPN 6,289,114 to Maingut.

As to claim 11, the combination of Hoffman and Hsu discloses the fingerprint authentication system according to claim 10.

Hoffman further discloses a fingerprint reader (Fig. 1, Fig. 3, element 13 and column 9, lines 27-30), transmitter (Fig. 1 and column 9, lines 36-43 and column 9, line 66 – column 10, line 4), memory that stores the reference fingerprint image of an entire fingerprint (Fig. 1, DPC, Biometric Database) and a collation section that compares an entire fingerprint of a user and an entire reference fingerprint image (column 10, lines 2-4).

Neither Hoffman nor Hsu disclose expressly wherein a plurality of partial fingerprint images are transmitted and combined to produce an entire fingerprint image of the user.

Maingut discloses wherein said fingerprint reader reads a partial fingerprint image;

Said fingerprint transmitter transmits a plurality of partial fingerprint images (column 3, lines 5-7);

said collation section comprises a synthesizer configured to combine the plurality of partial fingerprint images transmitted from said fingerprint transmitter to produce an entire fingerprint image of the user (column 3, lines 27-35) and collates the entire fingerprint image produced by said synthesizer with the reference fingerprint image (column 9, lines 14-31).

Hoffman, Hsu & Maingut are combinable because they are from same art of fingerprint analysis.



At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the inventions of Hoffman, Hsu and Maingut, this providing the ability to take partial input images and combine them to create a complete fingerprint image.

The suggestion/motivation for doing so would have been that capturing a partial fingerprint image is reliable and inexpensive (column 2, lines 49-52).

Therefore, it would have been obvious to combine Hoffman and Hsu with Maingut to obtain the invention as specified in claim 11.

As to claim 14, please refer to the rejections made for claim 11 above.

As to claim 15, please refer to the rejections made for claim 12 above.

***Allowable Subject Matter***

7. Claims 7 and 8 are allowed.

8. The following is an examiner's statement of reasons for allowance: With respect to claim 7, none of the prior art teach or fairly suggest, an electronic device wherein an ordinary imaging mode is set if said slide cover covers the one end of the body of said device, and a fingerprint imaging mode is set if said slide cover is opened, in combination with the other limitations of the claim. US Patent 6,532,035 to Saari et al. discloses an electronic device with image pickup device capable of imaging things at short and long distances and US Patent 6,151,485 to Crisp discloses an electronic device with a sliding cover, but none of the prior art teach or fairly suggest a sliding cover on an electronic device that when put into one position is for an ordinary imaging mode and in another position is for fingerprint imaging.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claims 3 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent Publication 2002/0146157 to Goodman et al. discloses device for ordinary and fingerprint imaging.

USPN 6,088,585 to Schmitt et al. discloses a phone with an integrated fingerprint authentication device.

USPN 6,744,910 to McClurg et al. discloses a portable fingerprinting device.

USPN 6,177,950 to Robb discloses a phone/fingerprint device.

USPN 6,668,071 to Minkin et al. discloses a fingerprinting device with sliding cover.

USPN 5,337,043 to Gokcebay discloses a fingerprinting device with sliding cover.

USPN 6,370,362 to Hansen et al. discloses a cell phone with sliding cover.

USPN 6,073,027 to Norman et al. discloses a cell phone with sliding cover.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron W Carter whose telephone number is (703) 306-4060. The examiner can normally be reached on 7am - 3:30 am (Mon. - Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*AWC*  
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